

CLAIMS

1. A software-management system comprising a recording medium and an information-processing device, the recording medium including:

5 a normal storage unit having stored therein software that is computer data;

a secure storage unit not directly accessible from outside, and having stored therein license information relating to a usage condition of the software; and

10 a tamper-resistant module operable to judge, based on the license information, whether an operation, being one of installing software on the information-processing device and deactivating installed software, is permitted, and when judged in the affirmative, to output to the
15 information-processing device an instruction showing that the operation is permitted, and to rewrite the license information in accordance with the operation, and

the information-processing device including:

a receiving unit operable to receive the instruction
20 from the recording medium; and

a control unit operable to perform, in accordance with the received instruction, one of (i) receiving software from the recording medium and installing the received software in the information-processing device, and (ii) deactivating

installed software.

2. The software-management system of claim 1, further comprising a software-writing device that includes:

5 an information-storage unit having stored therein software that is computer data, and license information relating to a usage condition of the software;

 a reading unit operable to read the software and the license information from the information-storage unit; and

10 an output unit operable to output the read software and license information, wherein

 the recording medium further includes:

 a receiving unit operable to receive the software and the license information; and

15 a writing unit operable to write the received software to the normal storage unit and the received license information to the secure storage unit.

3. The software-management system of claim 2, wherein

20 the software-writing and information-processing devices are connected to each another via a network,

 the output unit of the software-writing device outputs the software securely via the network,

 the information-processing device further includes:

a receiving unit operable to receive the software securely via the network; and

an output unit operable to output the received software to the recording medium, and

5 the receiving unit of the recording medium receives the software from the information-processing device.

4. The software-management system of claim 2, further comprising a distribution device, wherein

10 the software-writing, information-processing, and distribution devices are connected to each another via a network,

the output unit of the software-writing device outputs the license information securely via the network,

15 the information-processing device further includes:

a receiving unit operable to receive the license information securely via the network; and

an output unit operable to output the received license information to the recording medium, and

20 the receiving unit of the recording medium receives the license information from the information-processing device.

5. A recording medium, comprising:

a normal storage unit having stored therein software

that is computer data;

a secure storage unit not directly accessible from outside, and having stored therein license information relating to a usage condition of the software; and

5 a tamper-resistant module operable to judge, based on the license information, whether an operation, being one of installing software on an information-processing device and deactivating installed software, is permitted, and when judged in the affirmative, to output to the
10 information-processing device an instruction showing that the operation is permitted, and to rewrite the license information in accordance with the operation.

6. The recording medium of claim 5, wherein

15 the normal storage unit stores the software, being one of a computer program and digital data,

the secure storage unit stores the license information, which relates to a usage condition of one of the computer program and the digital data, and

20 the tamper-resistant module judges whether the operation, being one of (i) installing or uninstalling the computer program with respect to the information-processing device and (ii) duplicating or deleting the digital data, is permitted.

7. The recording medium of claim 5, wherein

the normal storage unit stores the software, being one of a computer program and digital data that have been

5 encrypted using a soft key,

the secure storage unit stores the license information, which includes the soft key, and

the tamper-resistant module, when installation is judged to be permitted, extracts the soft key from the license
10 information, and outputs the instruction with the extracted soft key included therein.

8. The recording medium of claim 5, wherein

the secure storage unit stores the license information,
15 which includes signature data relating to the software, and

the tamper-resistant module, when installation is judged to be permitted, extracts the signature data from the license information, and outputs the instruction with the extracted signature data included therein.

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9. The recording medium of claim 5, wherein

the secure storage unit stores the license information, which includes signature data relating to the software, and

the tamper-resistant module, when installation is

judged to be permitted, extracts the signature data from the license information, and outputs the extracted signature data instead of the instruction.

5 10. The recording medium of claim 5, wherein

the secure storage unit stores the license information, which is generated by encrypting the usage condition using predetermined key information, and

10 the tamper-resistant module stores the key information, decrypts the license information using the key information to generate the usage condition, and performs the judgment based on the generated usage condition.

11. The recording medium of claim 5, wherein

15 the secure storage unit stores a part rather than a whole of the license information, and

the tamper-resistant module stores the remaining part of the license information, extracts the part of the license information stored in the secure storage unit, generates the license information from the extracted part and the stored remaining part, and performs the judgment based on the generated license information.

12. The recording medium of claims 5, wherein

the license information is a permitted usage count of the software, and

the tamper-resistant module judges whether installation is permitted by judging whether the permitted usage count is greater than 0, judges that installation of the software is permitted when judged to be greater than 0, outputs the instruction, and writes the permitted usage count to the secure storage unit after reducing the count by 1.

10 13. The recording medium of claim 5, wherein

the license information is a permitted usage count of the software, and

the tamper-resistant module outputs the instruction when judged that deactivation of the software is permitted, and writes the permitted usage count to the secure storage unit after increasing the count by 1.

14. The recording medium of claim 5, wherein

the license information is a permitted usage period of the software, and

the tamper-resistant module judges whether installation is permitted by judging whether a current date-time is within the permitted usage period, judges that installation of the software is permitted when judged to be

within the permitted usage period, and outputs the instruction.

15. An information-processing device that performs at least
5 one of installing and deactivating software, comprising:

a receiving unit operable to receive an instruction from a recording medium; and

a control unit operable to perform, in accordance with the received instruction, one of (i) receiving software from
10 the recording medium and installing the received software in the information-processing device, and (ii) deactivating installed software, wherein

the recording medium includes:

a normal storage unit having stored therein software
15 that is computer data;

a secure storage unit not directly accessible from outside, and having stored therein license information relating to a usage condition of the software; and

a tamper-resistant module operable to judge, based on
20 the license information, whether an operation, being one of installing software on the information-processing device and deactivating installed software, is permitted, and when judged in the affirmative, to output to the information-processing device an instruction showing that

the operation is permitted, and to rewrite the license information in accordance with the operation.

16. The information-processing device of claim 15, wherein

5 the secure storage unit of the recording medium stores the license information, which includes signature data relating to the software,

 the tamper-resistant module of the recording medium, when installation is judged to be permitted, extracts the
10 signature data from the license information, and outputs the instruction with the extracted signature data included therein,

 the receiving unit receives the instruction with the signature data included therein, and

15 the control unit performs one of (i) verifying a correctness of software received from the recording medium using the received software and the signature data included in the received instruction and (ii) verifying a correctness of software installed in the information-processing device
20 using the installed software and the signature data included in the received instruction, and if verification is successful, performs the operation.

17. The information-processing device of claim 15, wherein

the secure storage unit of the recording medium stores the license information, which includes signature data relating to the software,

the tamper-resistant module of the recording medium,
5 when installation is judged to be permitted, extracts the signature data from the license information, and outputs the extracted signature data instead of the instruction,

the receiving unit receives the signature data, and
the control unit verifies a correctness of software
10 received from the recording medium using the received the signature data, and if verification is successful, installs the received software in the information-processing device.

12. A control method used by a recording medium that includes
15 a normal storage unit having stored therein software that is computer data, a secure storage unit not directly accessible from outside and having stored therein license information relating to a usage condition of the software, and a tamper-resistant module, comprising the steps of:

20 judging, based on the license information, whether an operation, being one of installing software on an information-processing device and deactivating installed software, is permitted;

outputting to the information-processing device when

judged in the affirmative, an instruction showing the operation to be permitted; and

rewriting the license information in accordance with the operation.

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19. A control computer program used by a recording medium that includes a normal storage unit having stored therein software that is computer data, a secure storage unit not directly accessible from outside and having stored therein
10 license information relating to a usage condition of the software, and a tamper-resistant module, comprising the steps of:

judging, based on the license information stored in the secure storage unit, whether an operation, being one of
15 installing software on an information-processing device and deactivating installed software, is permitted;

outputting to the information-processing device when judged in the affirmative, an instruction showing the operation to be permitted; and

20 rewriting the license information in accordance with the operation.

20. The computer program of claim 19 is stored on a computer-readable recording medium.

21. A software-management method used by an information-processing device that performs at least one of installing and deactivating software, comprising the steps
5 of:

receiving an instruction from a recording medium; and
performing, in accordance with the received instruction, one of (i) receiving software from the recording medium and installing the received software in the
10 information-processing device, and (ii) deactivating installed software, wherein

the recording medium includes:

a normal storage unit having stored therein software that is computer data;

15 a secure storage unit not directly accessible from outside, and having stored therein license information relating to a usage condition of the software; and

a tamper-resistant module operable to judge, based on the license information, whether an operation, being one of
20 installing software on the information-processing device and deactivating installed software, is permitted, and when judged in the affirmative, to output to the information-processing device an instruction showing that the operation is permitted, and to rewrite the license

information in accordance with the operation.

22. A software-management computer program used by an information processing device that performs at least one of installing and deactivating software, comprising the steps
5 of:

receiving an instruction from a recording medium; and
performing, in accordance with the received instruction, one of (i) receiving software from the recording
10 medium and installing the received software in the information-processing device, and (ii) deactivating installed software, wherein

the recording medium includes:

a normal storage unit having stored therein software
15 that is computer data;

a secure storage unit not directly accessible from outside, and having stored therein license information relating to a usage condition of the software; and

a tamper-resistant module operable to judge, based on
20 the license information, whether an operation, being one of installing software on the information-processing device and deactivating installed software, is permitted, and when judged in the affirmative, to output to the information-processing device an instruction showing that

the operation is permitted, and to rewrite the license information in accordance with the operation.

23. The computer program of claim 22 is stored on a
5 computer-readable recording medium.